

## CLAIMS

**1 -** Method for detecting surface defects on the outer wall (2) of a transparent or translucent object (3), characterized in that it comprises the following steps:

- by means of a uniform, extensive, broad light source (4), sending an incident light beam (5) onto a surface of the outer wall (2) of the object,
- 5 – arranging a linear measuring sensor (8) to collect the light beam (9) reflected by a linear zone (Z) of the outer wall (2), illuminated by the light source (4),
- ensuring relative movement between firstly the object (3) and secondly the light source (4) and the linear measuring sensor (8), so as to move the linear measuring zone (Z) over the outer wall (2) of the object to cover the surface 10 to be inspected,
- and processing the light beams (9) received by the linear sensor, so as to create an image (I) and to identify within the image the presence of a surface defect corresponding to a dark area (s).

**2 -** Method as in claim 1, characterized in that it consists of sending onto the 15 surface of the outer wall (2) of the object an incident light beam (5) having an angle of incidence adapted to ensure optimum reflection of the incident light beam.

**3 -** Method as in claim 1 or 2, characterized in that it consists of arranging the linear measuring sensor (8) to collect the beam reflected at an angle of reflection ( $\beta$ ) of equal value to the angle of incidence ( $\beta$ ).

**4 -** Method as in claim 1, characterized in that for an object of revolution (3) having an axis of symmetry (X), it consists of:

- choosing, as linear zone (Z) of the outer wall (2) of the object, at least part of a generatrix (G) parallel to the axis of symmetry (X),
- ensuring movement of the object (3) about its axis of symmetry (X) through 25 a complete rotation.

**5 -** Device for detecting surface defects on the outer wall (2) of a transparent or translucent object (3), characterized in that it comprises:

- a uniform, extensive, broad light source (4), adapted to send an incident light beam (5) onto a surface of the outer wall (2) of the object,

- a linear sensor (8) to measure light beams, arranged to collect the light beam (9) reflected by a linear zone (Z) of the outer wall (2), illuminated by the light source (4),
  - means (12) ensuring relative movement between firstly the object and secondly the light source (4) and the linear measuring sensor (8), so as to move the linear measuring zone (Z) over the outer wall (2) of the object to cover the surface to be inspected,
  - and a unit (15) for analysing and processing the light beams received by the measuring sensor (8), adapted to create an image (I) and to identify, within the image, the presence of a surface defect corresponding to a dark area (s).
- 5           **6 -** Device as in claim 5, characterized in that the light source (4) is positioned, relative to object (3), so that the incident light beam (5) forms an incident angle that is adapted to ensure optimum reflection of the incident light beam.
- 10          **7 -** Device as in claim 5 or 6, characterized in that the linear measuring sensor (8) is positioned with respect to object (3), to collect the beam reflected at an angle of reflection ( $\beta$ ) of equal value to the angle of incidence ( $\beta$ ).
- 15          **8 -** Device as in claim 5, 6 or 7, characterized in that the light source (4) and the linear measuring sensor (8) are positioned to respectively send an incident light beam (5) and collect the reflected light beam (9), for a linear zone (Z) of the outer wall of the object forming at least part of a generatrix (G) of an object of revolution having an axis symmetry (X), and in that the movement means (12) ensure movement of the object (3) about its axis of symmetry (X) through a complete rotation..
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